

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of controlling a diode laser device ~~(203)~~ which is operable to receive a control signal ~~(202)~~ and to output an optical signal when the control signal ~~(202)~~ exceeds a threshold value, the method comprising acts of:

supplying, to the diode laser device as the control signal ~~(202)~~ and at a predetermined turn-on time, a bias signal having a value which exceeds the threshold value, and

~~characterised by~~ supplying to the diode laser device ~~(203)~~, as the control signal ~~(202)~~ and at a predefined time before the predetermined turn-on time, a pre-bias signal, which has a magnitude less than the threshold value and extends for a time period,

wherein the predefined time, magnitude, and time period of the pre-bias signal ~~determining a required~~ are selected to tune an output power profile of the output optical signal ~~(205)~~ to a desired profile.

2. (Currently Amended) A The method as claimed in claim 1, wherein

the pre-bias signal comprises a series of pre-bias pulses, having respective predefined times, magnitudes and extents, ~~wherein the combination of the plurality of pre-bias pulses causes~~ which are selected to tune the output optical signal to have ~~the required~~ a desired power profile.

3. (Currently Amended) ~~A-The~~ A method as claimed in claim 1, wherein the pre-bias signal is a stepped value.

4. (Currently Amended) ~~A-The~~ A method as claimed in claim 1, wherein the predetermined turn-on time is defined by a clock signal.

5. (Currently Amended) ~~A-The~~ A method as claimed in claim 1, wherein the predetermined turn-on time is determined by a required output power profile of the output optical signal ~~(205)~~.

6. (Currently Amended) ~~A-The~~ A method as claimed in claim 1, wherein the ~~value~~ predefined time, magnitude, and time period of the pre-bias signal ~~is determined by a required output power profile of~~ are selected for tuning a position the output optical signal ~~(205)~~ to coincide with a channel bit clock of an optical recording system.

7. (Currently Amended) A method of controlling a diode laser device ~~(203)~~ in an optical system ~~(200)~~, the system ~~(200)~~ including a laser diode device ~~(203)~~ a controller ~~(201)~~, wherein the laser diode device ~~(203)~~ is operable to receive a control signal ~~(202)~~ from the controller ~~(201)~~ and to output an optical signal ~~(205)~~ when the control signal ~~(202)~~ exceeds a threshold value, the method comprising acts of:

supplying, to the diode laser device as the control signal (202) and at a predetermined turn-on time, a bias signal having a value which exceeds the threshold value, ; and

~~characterised by~~ supplying to the diode laser device ~~(203)~~, as the control signal ~~(202)~~ and at a predefined time before the predetermined turn-on time, a pre-bias signal, which has a magnitude less than the threshold value and extends for a time period,

wherein the predefined time, magnitude, and time period of the pre-bias signal ~~determining a required~~ are selected to tune an output power profile of the output optical signal ~~(205)~~ to a desired profile.

8. (Currently Amended) ~~A—The~~ method as claimed in claim 7, wherein the pre-bias signal comprises a series of pre-bias pulses, having respective predefined times, magnitudes and extents, ~~wherein the combination of the plurality of pre-bias pulses causes which are selected to tune the output optical signal to have the required a desired power profile.~~

9. (Currently Amended) ~~A—The~~ method as claimed in claim 7, wherein the pre-bias signal is a stepped value.

10. (Currently Amended) ~~A—The~~ method as claimed in claim 7, wherein the predetermined turn-on time is defined by a clock signal.

11. (Currently Amended) ~~A—The~~ method as claimed in claim 7, wherein the predetermined turn-on time is determined by a required output power profile of the output optical signal ~~(205)~~.

12. (Currently Amended) ~~A—The~~ method as claimed in claim 7, wherein the ~~value predefined time, magnitude, and time period of the pre-bias signal is determined by a required output power profile are~~

selected for tuning a position of the output optical signal—(205) to coincide with a channel bit clock of an optical recording system.

13. (Currently Amended) An optical system ~~(200)~~ comprising,
a controller ~~(201)~~ operable to output a control signal; and
a laser diode device ~~(203)~~ operable to receive a control signal from the controller ~~(201)~~, and to output an optical signal ~~(205)~~ when the control signal ~~(202)~~ exceeds a threshold value,
wherein the controller ~~(201)~~ is operable to output to the laser diode device ~~(203)~~, as the control signal ~~(202)~~ and at a predetermined turn-on time, a bias signal having a value which exceeds the threshold value to the laser diode device, and

~~characterised in that~~wherein the controller is operable to output to the laser diode device, as the control signal ~~(202)~~ and before the predetermined turn-on time, a pre-bias signal to the laser diode device ~~(203)~~, which pre-bias signal has a magnitude less than the threshold value and extends for a time period,

wherein the predefined time, magnitude, and time period of the pre-bias signal determining a required are selected to tune an output power profile of the output optical signal—(205) to a

desired profile.

14. (Currently Amended) ~~An-The~~ optical system ~~(200)~~ as claimed in claim 13, wherein the controller (201) is operable to supply a pre-bias signal comprising a series of pre-bias pulses, having respective predefined times, magnitudes and extents, ~~wherein the combination of the plurality of pre-bias pulses causes which are~~ selected to tune the output optical signal to have the required desired power profile.

15. (Currently Amended) ~~An-The~~ optical system as claimed in claim 13, wherein the controller ~~(201)~~ is operable to supply a multi-valued pre-bias signal to the laser diode device ~~(203)~~.

16. (Currently Amended) ~~An-The~~ optical system as claimed in claim 13, wherein the controller is operable to output to the laser diode device as the control signal ~~(202)~~ and before the predetermined turn-on time, a pre-bias signal, which has a value less than the threshold value, and is defined by a clock signal of the system.

17. (Currently Amended) ~~An-The~~ optical system as claimed in claim

13, wherein the controller is operable to output to the laser diode device as the control signal ~~(202)~~ and before the predetermined turn-on time, a pre-bias signal which has a value less than the threshold value, wherein the controller is operable to determine the predetermined turn-on time by a required output power profile of the output optical signal ~~(205)~~.

18. (Currently Amended) ~~An~~ The optical system as claimed in claim 13, wherein the controller is operable to output to the laser diode device as the control signal ~~(202)~~ and before the predetermined turn-on time, a pre-bias signal which has a value less than the threshold value, wherein the controller is operable to determine the value of the pre-bias signal by a required output power profile of the output optical signal ~~(205)~~.

19. (New) The method as claimed in claim 1, further comprising an act of selecting values of the predefined time, magnitude, and time period of the pre-bias signal for tuning the output power profile of the output optical signal.

20. (New) The method as claimed in claim 7, further comprising an

act of selecting values of the predefined time, magnitude, and time period of the pre-bias signal for tuning the output power profile of the output optical signal.